

Urban greenspace and mental/physical health

Date	2 June 2022
Attention	Christchurch City Council

Purpose of this briefing

- Following the recent local government elections, the Christchurch City Council (CCC) has asked us to review urban greenspace provision in Christchurch and suggest practical ways of providing sufficient greenspace as development continues both within the city centre and on the urban periphery.
- This is prefaced with an overview of research on the connections between urban greenspace and health to justify our recommendations.

Background

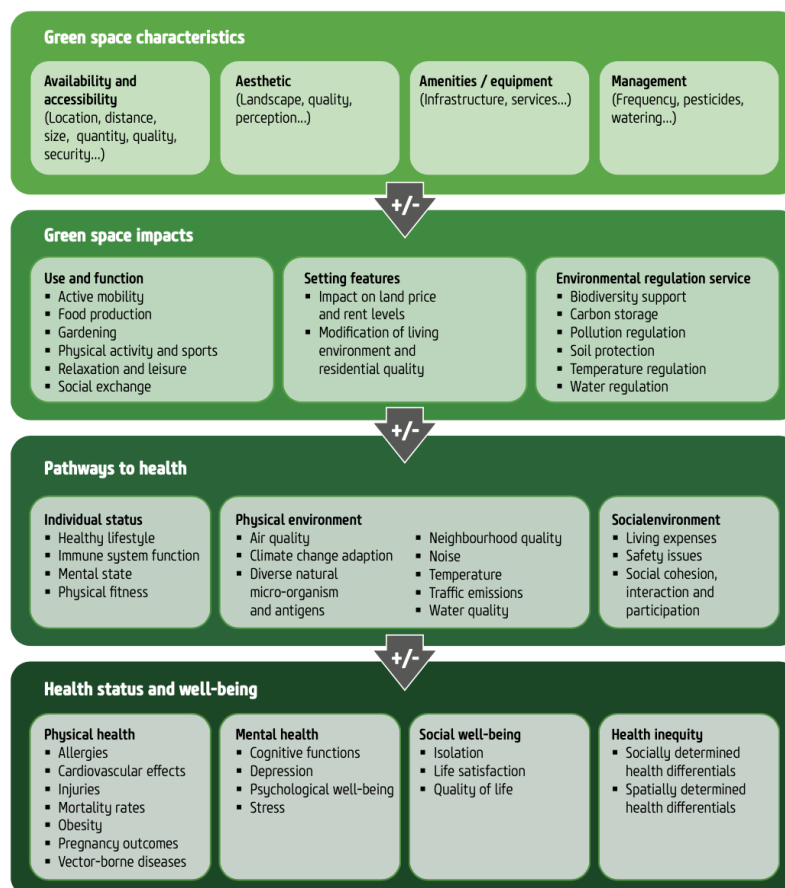


Figure 1: A causal model of the impacts of urban greenspaces on health and wellbeing.

- The connections between urban greenspace and health are various and well-researched. Figure 1 gives a comprehensive overview of these connections.¹
 - Physical health*: Benefits include improved cardiovascular health,² lower blood pressure and heart rate, reduction in salivary cortisol, lower incidence of diabetes³ and obesity,⁴ increased general fitness, and improved cognitive and immune function.¹

- 3.2. *Mental health*: Improvements include higher life satisfaction, increased positive and decreased negative emotions,⁵ lower incidence of anxiety and depression, reduced stress,⁶ and heightened relaxation.¹
- 3.3. *Social health*: Greenspaces serve as meeting places, enabling social interaction and fostering a sense of community.¹
- 3.4. *Mortality*: There is evidence that adequate greenspace access could prevent premature deaths – perhaps the equivalent of 245 years of life lost annually per 100,000 residents.^{1, 3, 7}
- 3.5. *Health equity*: Greenspace could be used to reduce health disparities, as people of lower socio-economic status benefit most from it.^{1, 8}
- 3.6. *Environmental health*: While the importance of greenspace for the environment’s health is not relevant to this briefing paper, it does have beneficial consequences for us, including improved drainage, wind and noise buffering, shade, and improved air quality.¹

Current urban greenspace provision in Christchurch

4. Figure 2 shows the CCC’s current and proposed greenspace provision.⁹

Open Spaces	Proposed Size	Current park or open space area per head of population	Proposed park or open space area per head of population by 2040
Pocket parks	Small sized open space Less than 1000m ²	Very small numbers of pocket parks	As required for amenity in the central city for seating / lunchtime / timeout areas. Space for trees and amenity planting
Neighbourhood and Garden City parks	Medium sized open spaces 3000m ² to 1 ha	Neighbourhood parks 1 ha per 1000 people	Neighbourhood parks - 1 ha per 1000 people. Central City neighbourhood parks - 0.4 ha per 1000 people
Metropolitan / Sports parks	4.5 ha or bigger	3.5 ha per 1000 people	3.5 ha per 1000 people subject to the outcome of the Sports Park Plan
CCC Managed Regional / Conservation parks	Size is highly variable	18 ha per 1000 people	25 ha per 1000 people
Waterways, living streets, green links, greenbelts	Linear open spaces a minimum of 8m wide for walkways and 20m wide for waterway margins	Not applicable	As required by detailed development plans
Cemetery	As required by the Cemeteries Master Plan	Not applicable	As required by the Cemeteries Master Plan

Figure 2: CCC open space standards.

5. Christchurch’s identity is strongly tied to being the Garden City, yet the urban greenspace that contributes to this reputation is being threatened by infill development.¹⁰
6. The Public Open Space Strategy has identified a lack of greenspace diversity and an urgent need to provide more public greenspace, both in the city centre and in greenfield developments, to compensate for residents’ reduced private space.¹⁰

7. The main limitations identified were the costs of greenspace maintenance, the need to plan greenspace provision either before or parallel with development, and the lack of pedestrian and cycle-friendly infrastructure linking urban greenspace.¹⁰

Suggested urban greenspace provision moving forward

8. Preservation of existing greenspace within Christchurch’s green frame should be a priority, as it is easier than creating new greenspace. However, urban greenspace preservation was not mentioned in the Public Open Space Strategy.
 - 8.1. In contrast, Wellington City Council’s Green Network Plan and the resulting framework acknowledged the need for “maximum possible protection of current green space in all land use categories,” and named “protecting existing green elements” as one of their four target areas.^{11, 12}
9. Greenfield developments are on the rise, and it is important that their residents can access public greenspace.
 - 9.1. Brisbane City Council has introduced a “low-medium density residential” (LMR2) zoning code which requires developments to provide “quality private and public open spaces and landscaping” which “provides spaces for outdoor activity areas and encourages outdoor living ... and activation of parks and streets.”¹³
10. Parklets – compact areas of urban greenspace – may be the ideal strategy for increasing greenspace provision in the city centre.
 - 10.1. Parklets align with the CCC’s and Environment Canterbury’s desire to make Christchurch a National Park City.¹⁴ As Environment Canterbury’s chair Jenny Hughey stated, “it’s about looking for opportunities to develop park-like spaces, however large or small, among a city’s streets, alleyways, and buildings.”¹⁵
 - 10.2. Park(ing) Day is a yearly event described by organisers as “a day where people across the world [including Wellington¹⁶] temporarily repurpose street parking spaces and convert them to tiny parks and places for art, play, and activism.”¹⁷ It expresses the appeal of parklets in a temporary way, providing the possibility of evaluating wider community response prior to implementing anything permanently.

Financing, logistics and policies

11. Figures 3 and 4 give an idea of the CCC’s financial constraints.^{18, 19}

Parks and foreshore	2021 actual	2021 planned	2020 actual
Cost of services	\$68,673,000	\$68,847,000	\$67,534,000
Operating revenue	\$3,335,000	\$3,414,000	\$3,915,000

Figure 3: CCC statement of cost of parks and foreshore services.

2021 CCC capital and operating expenditure (\$ million)

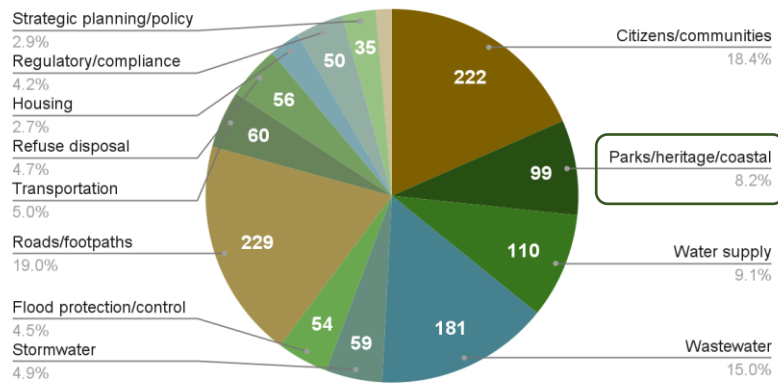


Figure 4: 2021 CCC capital and operating expenditure, with the parks/heritage/coastal category highlighted.

12. As identified earlier, maintenance costs are one of the main limitations to providing more greenspace. Parklets are very low maintenance, not only because of their size, but also through design choices such as using fake turf and planter boxes instead of grass and trees.
13. Very little land is needed for parklets, keeping land costs down, or eliminating them if council land is repurposed. Street parking is often used; however this could generate backlash from car users and nearby businesses.
14. Other costs that must be considered are those of safety, accessibility, and transport infrastructure. This may include lighting and crime prevention measures, following the Parks and Waterways Access Policy,²⁰ and installing cycleways or bus stops.
15. To ensure that new greenspaces are well patronised, they should respond to diverse demands identified through community engagement and partnerships, and their use should be promoted.
 - 15.1. Urban greenspaces fulfil the important role of connecting Ngāi Tahu with their land and heritage.¹⁰ Therefore it is important that their identity is reflected, as it has been through previous projects with the Matapopore Charitable Trust.²¹
 - 15.2. Parklets are communal by nature, and community members often identify sites that they want to convert. A programme like Los Angeles' People St can help with the realisation and ongoing maintenance of parklets.²²
16. Monitoring and evaluation are vital to ensure that greenspaces are serving communities as intended.
 - 16.1. It is particularly important that policy translates into action. In the case of Brisbane City Council's LMR2 zoning code, it was found that development applications were approved without meeting the greenspace requirements. Policies must be measurable and enforceable so that their vision can be realised.¹³

Recommendations

17. We recommend that you:
 - (a) establish regulations to preserve existing greenspace within the green frame;
 - (b) establish a minimum greenspace per capita requirement for greenfield developments;

- (c) investigate and consult on the implementation of parklets throughout the city centre, whether temporary or permanent.

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